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MYOCARDIAL ISCHEMIA AND INFARCTION

THE INCIDENCE OF ARRHYTHMIAS AND CLINICAL ARRHYTHMIC EVENTS IN PATIENTS WITH ACUTE CORONARY SYNDROMES TREATED WITH TICAGRELOR OR CLOPIDOGREL IN THE PLATO TRIAL

ACC Poster Contributions
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Session Title: Acute Myocardial Infarction--New Insights into Antiplatelet Therapy
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Background: Ticagrelor (TIC), a novel anti-platelet agent, reduces CV events including mortality in ACS. It may increase local adenosine concentrations and bradycardic events.

Methods: 2908 pts in the PLATO study comparing TIC and clopidogrel (CLOP) had 7-day continuous ECG (cECG) monitoring after randomization and at Day 30 to evaluate 1) differences in arrhythmias detected on cECG and 2) if arrhythmias were associated with clinical adverse events.

Results: At randomization, more pts treated with TIC vs. CLOP had ventricular pauses >3s (5.8 vs 3.6%, p=0.01) and >5s (2.0 vs 1.2%, p=0.10). Among pts with >5 episodes of pauses (n=33), the greatest excess of pauses in pts receiving TIC occurred at night (Figure). At 30d, bradyarrhythmias occurred less frequently and were more similar between treatments (2.1 v. 1.7% for >3s; 0.8 v. 0.6% for >5s pauses). Most pauses were SA nodal (66%). Among pts with pauses >3s, there were no differences in arrhythmic adverse events that occurred during cECG (19.1 v 22.6%) or during the entire 1-yr study (25.8 vs 25.8%), including syncope and pacemaker placement. There were also no differences in VT or SVT, though fewer pts on TIC had sudden cardiac death.

Conclusion: In PLATO, more pts on TIC than CLOP had ventricular pauses, which were predominantly asymptomatic, often SA nodal, and more common early after ACS and at night. However, there were no apparent clinical consequences related to the excess in ventricular pauses.